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TITLE: ENGINEERING PRODUCT SPECIFICATION, PART 1
CARD READER FOR MQX BOARD TESTER

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GENERAL ELECTRIC

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CARD READER FOR MQX BOARD TESTER

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1.3 CHARACTERISTICS OF THE CARD READER SUBSYSTEM

The CRS shall consist of the following:

- (a) The CRZ100 mechanism and electronics.
- (b) A control electronics section.
- (c) Common Peripheral Interface electronics. (Optional)
- (d) Manually controlled switching circuitry and signal level conversion, at the CRZ100 interface.
- (e) D.C. power supplied and A.C. control circuits.
- (f) Microfiche and 355 T&D cards storage.

The CRZ100 mechanism and electronics shall have the functional capabilities of feeding, reading, transporting, and stacking in a single output hopper standard 12 row, 80 column punched cards. The maximum operating rate shall be 300 cards per minute demand feed.

Two way switching logic shall be provided at the CRZ100 interface for communication between the CRZ100 and either the Common Peripheral Controller electronics or the MQX Board Tester. A switch, located on the MQX Board Tester Control panel, shall be provided to control this switching function while the CRS is cabled to the Board Tester. When the CRS is disconnected from the Board Tester, the switching logic shall connect the CRZ100 to the Common Peripheral Controller. The Common Peripheral Controller section shall function in a manner compatible with existing card reader subsystems.

The functions of the Board Tester, when operating the CRZ100, are beyond the scope of the EPS-1 (Refer to 43A177854). For the purpose of this specification, only logic level conversion is required for signals between the CRZ100 and the Board Tester.

The Card Reader Subsystem shall be a self contained mobile cabinet including all required D-C. power supplies and A.C. control circuits.

Storage shall be provided for a minimum of 300 microfiche cards and two trays of punched cards.

2.0 PERFORMANCE CAPABILITIES

The CRS shall be constructed such that the Common Peripheral Interface electronics may be excluded as non-selected option.

2.1 SPEED

The nominal demand feed rate is 300 cards per minute.
(See paragraph 3.1 for further details.)

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3.5.10 CRS Maintenance Switches and Indicators

Additional switches and indicators are required for maintenance purposes which shall be located within the CRS, but easily accessible to the operator.

3.5.10.1 TEST COMPARE/OFF Switch

This switch enables logic which generates a special test pattern against which a test deck is compared to verified card reader output. Failure to compare will halt the card reader and will be indicated by the sub-status indicators.

3.5.10.2 INITIALIZE Switch

This momentary contact switch provides a means of initiating an initial clear signal to the control electronics, and resetting or setting all flip flops to a known state.

3.5.10.3 NORMAL/TEST Switch

This switch, in the TEST position, enables all maintenance functions which require the Card Reader. The Common Peripheral Controller is placed in the off-line state. No data transfer takes place to the external user.

This switch, in the NORMAL position, disables all maintenance functions.

3.5.10.4 Major Status Indicators

Four indicators shall provide a visual indication of the major status of the card reader at all times, in order of priority.

3.5.10.5 Substatus Indicators

Six indicators shall provide a visual indication of the card reader substatus at all times.

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3.6.4 Temperature and Humidity (continued)

Recommended conditions for cards in constant use are:

Temperature - 65 to 85 degrees Fahrenheit/18.3 to 29.5 degrees Centigrade

Humidity - 40 to 60 percent

However, if the cards are stored in an area where the temperature and humidity differ greatly from that of the processing site, the cards must be conditioned at the proper temperature and humidity prior to use. Actual conditioning time required depends upon the temperature and humidity of the area where the cards were stored and the length of time the cards were exposed to the out-of-limits conditions. If cards have been away from proper conditions for more than 12 hours, they normally require 24 hours of conditioning; if for less than 12 hours, the conditioning time should be twice the time of exposure. The supply of blank cards must also be stored in areas of approximately the same relative humidity as the processing site. If this is not possible, at least a week's supply of cards should be kept in the processing area.

C 3.7 ELECTRICAL REQUIREMENTS

All DC power supplies and all AC control circuits shall be self contained in the Card Reader Subsystem cabinet.

4.0 HARDWARE INTERFACE REQUIREMENTS

4.1 INPUT LINES TO THE CONTROLLER SECTION FROM THE EXTERNAL USER

The input lines shall conform to the Common Peripheral Interface Specification as defined in the Honeywell Specification, 43A130524, Revision H.

4.2 OUTPUT LINES TO THE EXTERNAL USER

The output lines shall conform to the Common Peripheral Interface Specification as defined in Honeywell Specification, 43A130524, Rev. H.